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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,846	2/14/2001	Mark G. Torchia	85058-202 ADB	1835
23529	7590	02/06/2004	EXAMINER	
ADE & COMPANY 1700-360 MAIN STREET WINNIPEG, MB R3C3Z3 CANADA			JUNG, WILLIAM C	
			ART UNIT	PAPER NUMBER
			3737	

DATE MAILED: 02/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,846

Applicant(s)

TORCHIA ET AL.

Examiner

William Jung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-17, 19-24, 27-32, 36-41, 44-50, and 53-56 is/are rejected.
- 7) ☒ Claim(s) 9, 18, 25, 26, 33-35, 42, 43, 51, and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 14, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the length of the abstract exceeds 15 lines or 150 words. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 33-35 are objected to because of the following informalities: The term "the chamfered end" in claims 33-35 lacks antecedent basis from the referred claim 23. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8,10-17,19-24,27-32, 36-41,44-50, and 53-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Diederich (US 5,620,479).

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Diederich anticipates all feature elements in claims 1, 4, 23, 38, 40, and 55. Diederich discloses of an ultrasound therapy method and apparatus, where a catheter 12 is designed to place in a living body, invasively placing the catheter to a therapeutically targeted volume. Once the catheter is placed in a desired volume, an HIFU is applied to the targeted tissue to perform therapeutic procedure where the catheter includes distal end with ultrasound transducers 16 providing heat directed that the target volume (col. 3, lines 11-67; col. 6, line 43 – col. 7, line 35). The shape of the transducer is cylindrical or disk like with probe rotation to cover different angle to the treatment volume (col. 12, line 48- col. 13, line 2). In addition, the catheter consists of thermocooling mechanism to remove heat from the probe by circulating pressurized fluid around the heating transducer (col. 3, line 66 – col. 4, line 62).

Claims 2 and 3: Dierderich further disclose that the transducers 16 above are segmented to select different volume heating zone. The heating promotes coagulation of the tissue (col. 3, lines 42-64; col. 4, lines 29-62).

Claims 5, 20, 36, 37, 53, and 54: Diederich also discloses of temperature sensor to generate temperature representation of the heating zone during the therapeutical procedure (col. 4, lines 54-col. 5, line 3).

Claims 6, 17-19, 39, 50, and 56: Diederich discloses of heat sources consisting of laser or optical light source to direct the thermal control of the heating elements (col. 1, line 60 – col. 2, line 6).

Claims 7, 8, 11-16, 21, 22, 24, 27-32, 41, and 44-49: The cooling mechanism described above is further disclosed by Diederich as having cooling fluid circulating the transducer with cooling chamber, air for liquid to improve the heating distribution and controlling the heating

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temperature. The air duct or spacer 22 is arranged inside the outer tube where the tube is supplying heat removal from the transducer (col. 7, line 57 – col. 8, line 7).

Claim 10: Diederich discloses of power deposition control, which increases or reduces heating of the transducer segment (col. 4, lines 29-62).

Allowable Subject Matter

6. Claim 9, 18, 25, 26, 42, 43, 51, and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Law et al (US 5,762,066) and Masychev (US 6,123,719).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung whose telephone number is 703-605-4364. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Ruhl can be reached on 703-308-2262. The fax phone number for the organization where this application or proceeding is assigned is 703-308-0758.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

WJ

January 14, 2004


DENNIS W. RUHL
SUPERVISORY PATENT EXAMINER